



MATHEMATICS PRIMARY FIVE FIRST TERM

PART (1)





UNIT

1

Theme 1 | Number Sense and Operations

Unit 1

Decimal

Place Value

and

Computation



Concept (1-1)

Decimals to the Thousandths Place

Lesson (1): The Journey Begins



Whiteboard: 1. Use the terms in the word bank to fill in the place values in the chart. You can abbreviate Ones (O), Tens (T), and Hundreds (H) so they fit in the boxes.

Hundreds	Hundreds	Hundreds	Hundredths
Milliards	Millions	Ones	Ones
Ones	Ones	Ones	Tens
Tens	Tens	Tenths	Thousands

2. In 734.28 the digit 8 is in the _____ place. Its value is _____.

3. In 452.09 the digit 5 is in the _____ place. Its value is _____.



Whiteboard: 4. Write the following number in the place value chart: six hundred forty-two thousand, five hundred one, and fifty-one hundredths.

Milliards		Millions			Thousands			Ones			•	Decimals	
O		H T O			H T O			H T O			•	Tenths	Hundredths



Whiteboard: 5. Use the digits to create the greatest possible number. Record it in the place value chart.

7, 3, 6, 0, 2, 1, 4, 9, 2, 7

Milliards		Millions				Thousands			Ones			•	Decimals	
O		H	T	O		H	T	O	H	T	O	•	Tenths	Hundredths

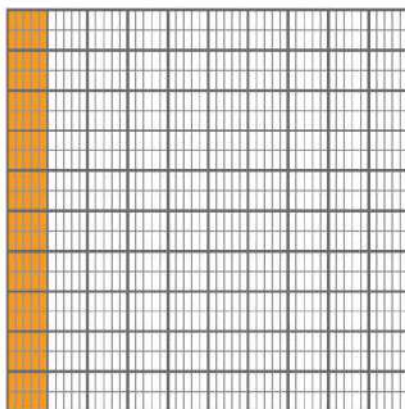


Whiteboard: 6. Use the digits to create the smallest possible number. Record it in the place value chart.

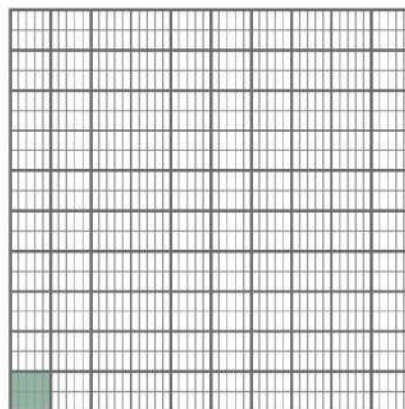
7, 3, 6, 0, 2, 1, 4, 9, 2, 7

Milliards		Millions				Thousands			Ones			•	Decimals	
O		H	T	O		H	T	O	H	T	O	•	Tenths	Hundredths

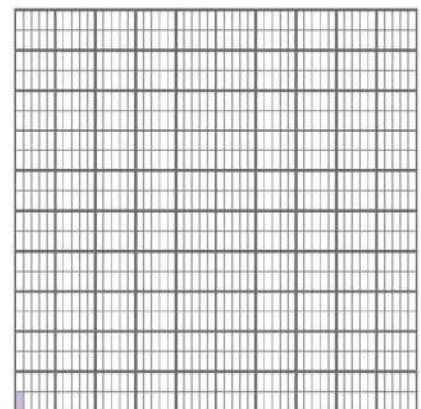
Lesson (2): Decimals to the thousandths place



1 Tenth



1 Hundredth



1 Thousandth



I'm in the
hundreds
place



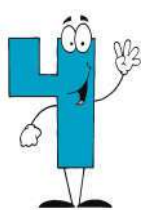
My value is
100

I'm in the
tens
place



My value is
30

I'm in the
ones
place

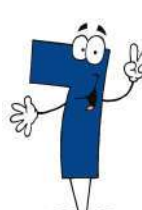


My value is
4

I'm the
decimal
point



I'm in
the tenths
place



My value is
0.7 or $\frac{7}{10}$

I'm in the
hundredths
place



My value is
0.08 or $\frac{8}{100}$

I'm in the
thousandths
place



My value is
0.009 or $\frac{9}{1000}$

hundreds
tens
ones
tenths
hundredths
thousandths

154.123

Remember:

0.4 , 0.40 and 0.400 are all equivalent

[1] Write the following numbers in the standard form:

- 1) Seven tenths =
- 2) Three tenths =
- 3) Seven thousandths =
- 4) Twenty four hundredths =



- 5) Three hundred fifty one hundredths =
- 6) Four and seven tenths =
- 7) Twenty and three hundredths =
- 8) Three hundred sixty four hundredths =
- 9) Ninety one and one thousandths =
- 10) Six hundred thirty five and nine tenths =



[2] Write the following decimals in the word form:

- 1) 0.3 =
- 2) 0.05 =
- 3) 0.34 =
- 4) 0.238 =
- 5) 3.7 =



[3] Complete the table:

Number	thousands	hundreds	tens	ones	decimal point	tenths	hundredths	thousandths
5.6					.			
27.98					.			
123.8					.			



[4] Circle the tenths digit:

36.85 - 78.2 - 636.4 - 1.124 - 0.024



[5] Circle the tens digit:

65.78 - 987.2 - 16.147 - 5644.2 - 102.6



[6] Circle the hundredths digit:

36.85 - 3.156 - 99.123 - 0.546



[7] Write the value of the red digit:

0.247 4.158 23.425 45.56 0.024

.....



[8] Write the value of the red digit:

36.85 79.2 638.4 1.324

.....



Write the following number in the place value table:

Six hundred forty two thousands, five hundred and eighty one hundredths.

Milliards	Millions			Thousands			Ones			Decimal Point	The decimal fraction	
Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones		Tenths	Hundredths



Complete the following as in the example:

• **Example:** 0.516 consists of five tenths, one hundredth and six thousandths.

- a 0.837 consists of tenths, hundredths, thousandths.
 b 0.945 consists of tenths, hundredths, thousandths.



Write the following digits in the place value table to form:

- a the greatest decimal number b the smallest decimal number

7 , 3 , 6 , 0 , 2 , 1 , 4 , 9 , 2 , 7

	Millions			Thousands			Ones			Decimal Point	The decimal fraction	
	Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones		Tenths	Hundredths
The greatest												
The smallest												



Choose the correct answer:

a Forty three thousandths =

1 0.430

2 0.043

3 3.040

4 340.000

b Two hundred seven thousandths =

1 0.207

2 0.702

3 2.007

4 207.000

c Three tenths and 8 thousandths =

1 0.308

2 0.830

3 0.038

4 30.008

d 6 tenths, 5 thousandths and four hundredths =

1 60.405

2 0.645

3 0.546

4 0.654



Answer the following:

a In 734.28: the place value of 8 is

and its value is

b In 452.09: the place value of 5 is

and its value is

c In 675.42: the place value of 6 is

and its value is

d In 9,073.62: the place value of 9 is

and its value is



Complete the following as in the example:

• Example: $0.6 = 0.60 = 0.600$

6 tenths = 60 hundredths = 600 thousandths

a $0.700 = 0. = 0.7$

b $0.400 = 0.40 = 0.$

c $0.900 = 0.90 = 0.$

d $0. = 0.50 = 0.5$



Complete the following:

a 3 tenths = hundredths = thousandths.

b tenths = 50 hundredths = thousandths.

c tenths = hundredths = 700 thousandths.



Lesson (3): Place Value Shuffle:

Ten Is a Powerful Number Use the place value charts to solve each problem. | in the blanks to show how the value of each digit also changed. An example is shown.

Example: $57 \times 10 =$

Thousands	Ones			.	Decimals	
O	H	T	O	.	Tenths	Hundredths
		5	7	.	0	0
	5	7	0	.	0	0

The value of the whole number increased by a factor of 10.

The value of the 5 increased by a factor of 10 from 50 to 500.

The value of the 7 increased by a factor of 10 from 7 to 70.



1. $57 \div 10 =$

Thousands	Ones			.	Decimals	
O	H	T	O	.	Tenths	Hundredths

2. The value of the whole number _____ (increased/decreased) by a factor of 10.

The value of the _____ (first digit) _____ (increased/decreased) by a factor of 10 from _____ to _____.

The value of the _____ (second digit) _____ (increased/decreased) by a factor of 10 from _____ to _____.



3. $6.5 \times 10 =$

Thousands	Ones			.	Decimals	
O	H	T	O	.	Tenths	Hundredths

4. The value of the whole number _____ (increased/decreased) by a factor of 10.

The value of the _____ (first digit) _____ (increased/decreased) by a factor of 10 from _____ to _____.

The value of the _____ (second digit) _____ (increased/decreased) by a factor of 10 from _____ to _____.



5. $345 \div 10 =$

Thousands	Ones			.	Decimals	
O	H	T	O	.	Tenths	Hundredths

6. The value of the whole number _____ (increased/decreased) by a factor of 10.

The value of the _____ (first digit) _____ (increased/decreased) by a factor of 10 from _____ to _____.



Homework

[1] Write the following numbers in the standard form:

- 1) Two hundredths =
- 2) Sixteen hundredths =
- 3) Forty five tenths =
- 4) Nineteen thousandths =
- 5) Five hundred sixty nine thousandths =
- 6) Eighty five and sixty one thousandths =
- 7) Fifty two and thirty one thousandths =
- 8) Seventeen and forty four thousandths =



[2] Write the following decimals in the word form:

- 1) 0.1 =
- 2) 0.008 =
- 3) 0.047 =
- 4) 2.5 =
- 5) 32.8 =



[3] Complete the table:

Number	thousands	hundreds	tens	ones	decimal point	tenths	hundredths	thousandths
6.47					.			
456.2					.			
36.123					.			



[4] Circle the tenths digit:

864.2 - 88.6 - 978.2 - 9.687 - 0.008



[5] Circle the tens digit:

13.75 - 33.54 - 25.115 - 9936.5 - 300.7



[6] Circle the hundredths digit:

986.05 - 60.001 - 0.01 - 7.123



[7] Write the value of the red digit:

8.451 6.247 36.214 4.2 2.4

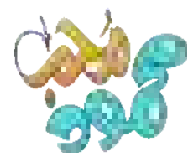
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[8] Write the value of the red digit:

867.2

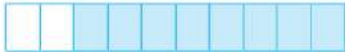
98.6

578.2

9.682



Choose the correct answer:

- 1 Five hundredths =
 (a) 50 (b) 500 (c) 0.5 (d) 0.05
- 2 The shaded part in the opposite figure is

 (a) 2 (b) 0.2 (c) 0.8 (d) 8
- 3 In the numeral form 7,605,219,834 the place value of the digit 7 is
 (a) ones (b) millions (c) thousands (d) millions
- 4 In the numeral form 9,243,618,075 the value of the digit 9 is
 (a) 9,000,000 (b) millions (c) millions (d) 9,000,000,000



Math around Egypt: Gas Price Decimals Look at the list of different petrol prices in Egypt. Take turns with your Shoulder Partner reading each of the petrol prices aloud.

Gas Prices per Liter, April 2021

80 Octane petrol: 6.75 LE
 92 Octane petrol: 8.00 LE
 95 Octane petrol: 9.00 LE

1. Which type of petrol is the least expensive?
2. Which type of petrol is the most expensive?



Use the place-value charts to solve each problem. Fill in the blanks to show how the value of each digit also changed.

a.

$$5.8 \times 10$$

Thousands	Ones			.	Decimals	
O	H	T	O	.	Tenths	Hundredths
				.		
				.		

- The value of the whole number _____ [increased / decreased]
- The value of the 5 [increased / decreased] when multiplying by 10 from _____ to _____
- The value of the 8 [increased / decreased] when multiplying by 10 from _____ to _____

b.

$$942 \div 100$$

Thousands	Ones			.	Decimals	
O	H	T	O	.	Tenths	Hundredths
				.		
				.		

- The value of the whole number _____ [increased / decreased]
- The value of the 9 [increased / decreased] when dividing by 100 from _____ to _____
- The value of the 2 [increased / decreased] when dividing by 100 from _____ to _____



Lesson (4): Composing and Decomposing Decimals

- You can decompose 843.572 in different ways using place-value chart :

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths
	8	4	3	.	5	7	2

- 1st way [expanded form] :

$$843.572 = 800 + 40 + 3 + 0.5 + 0.07 + 0.002$$

- 2nd way :

$$843.572 = 843 + 0.572$$

- 3rd way :

$$843.572 = 843 + 0.5 + 0.07 + 0.002$$

There are many answers that equal 843.572 when composed.



For each problem, record the number in the place value chart.
decompose the number in expanded form and then in two other ways.

1. 34.527

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths

1st way (expanded form): _____

2nd way: _____

3rd way: _____



2. 21.045

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths

1st way (expanded form): _____

2nd way: _____

3rd way: _____



3. 14.932

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths

1st way (expanded form): _____2nd way: _____3rd way: _____**Lesson (5): Comparing Decimals:**

Compare each set of numbers using the symbols for greater than (>), less than (<), or equal to (=).

1. 29.9° _____ 30.2°

4. 35.2° _____ 34.7°

2. 36.5° _____ 35.6°

5. 38.80° _____ 38.8°

3. 40.5° _____ 41.0°



Select the largest number:

1.401 1.341 1.440 1.055 1.3 1.30 1.28 1.49



Select the smallest number:

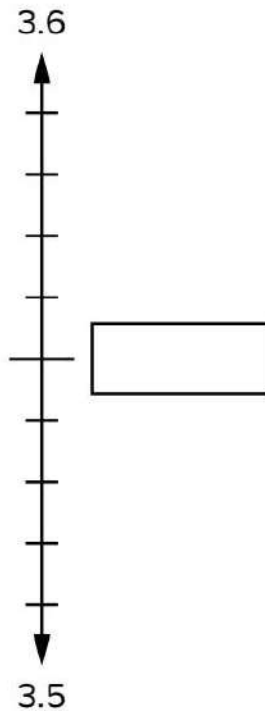
20.09 20.1 20.001 20.011 20.10 20.010 20.9 20.21



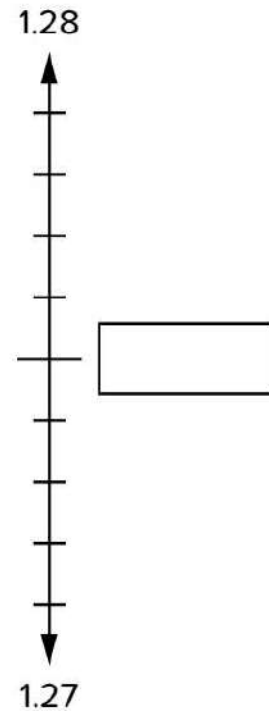
Lesson (6): Rounding Decimals:

Round and Round Label the midpoint of the number lines. Place the given decimal number at its proper location.

1. Round 3.54 to the nearest Tenth.



2. Round 1.277 to the nearest Hundredth.



1. A farmer is building a new fence for her sheep field. She wants to build a fence around the whole field. Estimate how much fencing you think she will need by rounding each dimension to the nearest Tenth. Explain your thinking.

125.45 m

89.52 m



2. Mazen is planning a trip from Cairo to the waterfall region in Wadi El Rayan. He will travel 147.72 kilometers. Round the distance to the nearest Tenth.



3. Mazen stops to have a snack and stretch after driving 73.255 kilometers. Round the distance to the nearest Hundredth.



4. Fill in the chart as you round the decimal to the stated place value.

Number	Round to the nearest whole number	Round to the nearest Tenth	Round to the nearest Hundredth
56.284			



Homework

For each problem, record the number in the place value chart.
decompose the number in expanded form and then in two other ways.

4. 231.128

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths

1st way (expanded form): _____

2nd way: _____

3rd way: _____



5. 508.17

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths

1st way (expanded form): _____

2nd way: _____

3rd way: _____



Compare using ">, < or =".

a. 3.204 3.24

b. 19.2 19.200

c. 20.7 20.077

d. 1.01 1.099

e. 9.08 9.079

f. 14.010 $14\frac{9}{10}$

g. 4.12 $4 + 0.1 + 0.007$

h. 5 thousandths 0.500



Choose the correct answer.

1. 3.24 3.239
 A. > B. <
 C. =

2. Which of the following is greater than 1.72?
 A. 1.27 B. 1.07
 C. 1.8 D. 1.072

3. 19 hundredths 19 thousandths
 A. > B. <
 C. =

4. Which of the following is true?
 A. $0.532 > 0.537$ B. $0.1 + 3 < 1.3$
 C. $1.019 > 1.1$ D. $\frac{18}{10} = 1.8$

5. $4 + 0.2 + 0.05 + 0.007$ 4257 hundredths
 A. > B. < C. =

6. 3.408 $\frac{348}{100}$
 A. > B. <
 C. =

7. $14.1 \square 7 > 14.158$
 A. 3 B. 4
 C. 5 D. 6



Round each of the following numbers to the nearest whole number.

a. $0.7 \approx$ _____

b. $0.215 \approx$ _____

c. $0.512 \approx$ _____

d. $9.9 \approx$ _____

e. $51.56 \approx$ _____

f. $10.18 \approx$ _____

g. $600.601 \approx$ _____

h. $0.999 \approx$ _____

i. $0.009 \approx$ _____



Round each of the following numbers to the nearest Tenth.

a. $13.75 \approx$ _____

b. $83.914 \approx$ _____

c. $90.09 \approx$ _____

d. $0.208 \approx$ _____

e. $43.95 \approx$ _____

f. $3.92 \approx$ _____

g. $170.597 \approx$ _____

h. $0.07 \approx$ _____

i. $502\frac{37}{100} \approx$ _____



Round each of the following numbers to the nearest Hundredth.

a. $76.514 \approx$ _____

b. $52.608 \approx$ _____

c. $52.1248 \approx$ _____

d. $0.737 \approx$ _____

e. $0.996 \approx$ _____

f. $3\frac{8}{1000} \approx$ _____



Round each of the following numbers to the nearest Thousandth.

a. $2.0509 \approx$ _____

b. $0.0474 \approx$ _____

c. $4.6798 \approx$ _____

d. $19.9996 \approx$ _____

e. $0.0004 \approx$ _____

f. $0.9986 \approx$ _____



Round each number to the place of the underlined digit.

a. $8.1437 \approx$ _____

b. $52.5 \approx$ _____

c. $35.1072 \approx$ _____

d. $17.97 \approx$ _____

e. $55.524 \approx$ _____

f. $1.5698 \approx$ _____

g. $2.4355 \approx$ _____

h. $0.215 \approx$ _____

i. $1.595 \approx$ _____



Concept (1-2)

Adding and Subtracting Decimals

Lesson (7): Estimating Decimal Sums:

Estimation Strategies (Try to use as many as you can.)

Front-End Estimation
Round to Ones

Benchmark Decimals
Round to Tenths

Separate Wholes and Parts
Round to Hundredths

1. $3.451 + 8.091$

Estimate: _____

2. $9.98 + 4.56$

Estimate: _____

3. $4.981 + 5.019$

Estimate: _____

4. Samar wanted to ride her bike 40 kilometers this week. By Thursday she had ridden 34.99 kilometers. On Friday she rode 4.01 kilometers. Estimate to see if she has met her goal.

Estimate: _____

5. Taha has 54.20 LE. His brother has 45.75 LE. They want to combine their money to purchase a box of apples for 100 LE. Estimate to see if they have enough money.

Estimate: _____



Lesson (8): Modeling Decimal Addition:

The Nile is the largest river system in the world. The Nile flows north more than 6,650 kilometers into the Mediterranean Sea, and 95 percent of Egyptians live within a few kilometers of the river. The Nile has two main tributaries: The White Nile and the Blue Nile that flow into the river. The confluence of these rivers is in Khartoum, Sudan, where they join to form the Nile. The river then flows north where it meets the Mediterranean Sea.



You are traveling from where the Nile River meets the Mediterranean Sea to the confluence of the Blue and White Nile in Khartoum. This is a distance of 2,406.69 kilometers.

1. Round 2,406.69 to the nearest Thousand.
2. Round 2,406.69 to the nearest Hundred.
3. Round 2,406.69 to the nearest One.
4. Round 2,406.69 to the nearest Tenth.



1. Record 0.97 and 0.42 in the place value chart.

Thousands		Ones			•	Decimals	
O		H	T	O	•	Tenths	Hundredths

2. Evaluate: $0.97 + 0.42 =$ _____



Lesson (9): Thinking Like a Mathematician:

Regroup or Not Evaluate each sum. Identify each digit's place value. Finally, compare answers with a partner.

1. 4 Thousandths + 3 Thousandths = _____ Thousandths

Place value: _____ Hundredth(s) _____ Thousandth(s)

2. 7 Thousandths + 4 Thousandths = _____ Thousandth(s)

Place value: _____ Hundredth(s) _____ Thousandth(s)

3. 39 Thousandths + 5 Thousandths = _____ Thousandth(s)

Place value: _____ Hundredth(s) _____ Thousandth(s)

4. 3 Hundredths + 85 Thousandths = _____ Thousandth(s)

Place value: _____ Tenth(s) _____ Hundredth(s) _____ Thousandth(s)



Add using the place value chart:

1 456.25 + 23.028 =

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



2 $9,586.35 + 892.9 = \dots\dots\dots$

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



3 $32.56 + 1,856.996 = \dots\dots\dots$

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



4 $6,245.7 + 36.578 = \dots\dots\dots$

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



Find the result:

a $14.63 + 34.25 = \dots\dots\dots$

b $17.3 + 4.6 = \dots\dots\dots$

c $2.536 + 1.203 = \dots\dots\dots$

d $0.875 + 0.43 = \dots\dots\dots$

e $2.65 + 9.3 = \dots\dots\dots$

f $89.75 + 4.34 = \dots\dots\dots$

g $2.536 + 0.203 = \dots\dots\dots$

h $5.42 + 3.362 = \dots\dots\dots$

i $72.7 + 65.31 = \dots\dots\dots$

j $381.5 + 76.53 = \dots\dots\dots$

**Complete the missing digits:****a**

$$\begin{array}{r} 3 . \square 7 \\ + 6 . 5 \square \\ \hline \square . 8 9 \end{array}$$

b

$$\begin{array}{r} 1 . \square 6 \\ + 3 . 3 \square \\ \hline \square . 3 3 \end{array}$$

c

$$\begin{array}{r} 3 . 2 \square \\ + 5 . \square 3 \\ \hline \square . 7 3 \end{array}$$

d

$$\begin{array}{r} 97 . 4 8 \\ + 43 . \square \square \\ \hline \square \square \square . 9 3 \end{array}$$

**Homework****Add using the place value chart:**

a $0.8 + 3.09 = \dots\dots\dots$

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



b) $0.245 + 3.89 =$

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



c) $4.028 + 2.83 =$

Thousands	Ones			.	Decimals		
O	H	T	O	.	Tenths	Hundredths	Thousandths



Find the result of each of the following.

a.
$$\begin{array}{r} 0.231 \\ + 0.754 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 2.53 \\ + 0.19 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 4.89 \\ + 0.87 \\ \hline \end{array}$$

d.
$$\begin{array}{r} 16.34 \\ + 8.79 \\ \hline \end{array}$$

e.
$$\begin{array}{r} 7.51 \\ + 6.492 \\ \hline \end{array}$$

f.
$$\begin{array}{r} 967.63 \\ + 91.2 \\ \hline \end{array}$$

g.
$$\begin{array}{r} 48.42 \\ + 59.096 \\ \hline \end{array}$$

h.
$$\begin{array}{r} 35.001 \\ + 14.999 \\ \hline \end{array}$$

i.
$$\begin{array}{r} 4.15 \\ + 8.6 \\ + 9.283 \\ \hline \end{array}$$



Governorate	Number of Date Palm Trees	Typical Mass of Date Palm Trees (kg)
Alexandria	25,062	97.16
Giza	456,939	134.76
Qena	285,825	60.99
New Valley	692,491	51.66

1. Estimate the typical mass of date palms in the governorates of Alexandria and New Valley.
2. Would the combined typical mass of date palms in New Valley and Qena be greater than or less than the typical mass of the date palms in Giza?



Find the result:

k $14.78 + 2.5 = \dots\dots\dots$

l $30.33 + 3.3 = \dots\dots\dots$

m $7.7 + 8.005 = \dots\dots\dots$

n $22.3 + 11.415 = \dots\dots\dots$

o $271.306 + 3.5 = \dots\dots\dots$

p $205.7 + 99.103 = \dots\dots\dots$

q $1.007 + 9 = \dots\dots\dots$

r $13 + 2.65 = \dots\dots\dots$

s $48.005 + 24.25 = \dots\dots\dots$

t $100 + 47.85 = \dots\dots\dots$

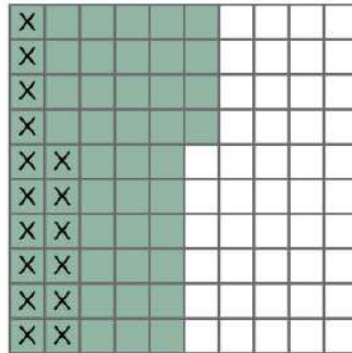
u $17.007 + 12.07 = \dots\dots\dots$

v $213.01 + 27.99 = \dots\dots\dots$



Lesson (10): Subtracting Decimals:

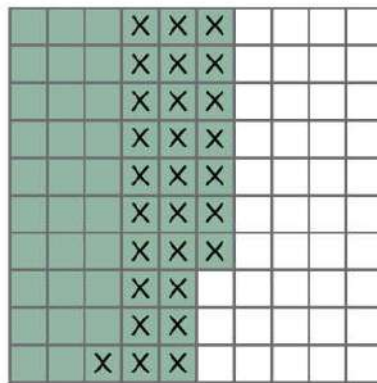
1. The shaded minuend is a decimal number. The x's represent the subtrahend, the number that is subtracted from the minuend. Use the model to solve the subtraction problem.



_____ - _____ = _____



Write an expression to match the model. Then, use the model to evaluate the expression.



_____ - _____ = _____



Record the problem in the place value chart: $0.2 - 0.05 =$ _____.

Thousands	Ones			•	Decimals		
O	H	T	O	•	Tenths	Hundredths	Thousandths

Use the model or place value chart to evaluate the expression:

$$0.2 - 0.05 = \underline{\hspace{2cm}}$$



Lesson (11): Estimating Decimal Differences:

Lesson (12): Subtracting to the thousandths Place:

Estimate each of the following.

a. $0.92 - 0.76$

b. $17.01 - 13.9$

c. $140.61 - 99.43$



1. $2.419 - 1.240$ Estimate: _____

2. $35.9 - 10.8$ Estimate: _____

3. Estimate: $29.98 - 11.99$ _____

4. Evaluate: $29.98 - 11.99 =$ _____



Find the result of each of the following.

a. $5.473 - 3.362 =$ _____

b. $2.536 - 1.203 =$ _____

c. $6.4 - 5.378 =$ _____

d. $100 - 47.85 =$ _____

e. $0.9 - 0.889 =$ _____

f. $12.74 - 0.359 =$ _____



Choose the correct answer.

1. $137.234 - 37.04 =$ _____

- A. 133.530 B. 99.166
C. 100.194 D. 100.230

2. $45.9 - 20.76$ estimate _____

- A. 18 B. 25
C. 31 D. 35

3. 7 Tenths – 7 Thousandths = _____

- A. 0.693 B. 0.63
C. 6.3 D. Zero

4. $24.5 - 18.92 =$ _____

- A. 5.58 B. 5.63
C. 5.6 D. 6.5

5. $77.55 - 1.9$ ○ $76.21 - 0.8$

- A. > B. <
C. =

6. $99.9 - 9.99 =$ _____

- A. 90.09 B. 90.9
C. 89.19 D. 89.91

7. $94. \square 8 - 9.82 = 84.46$

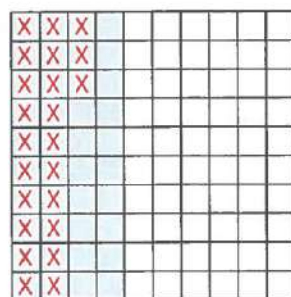
- A. 1 B. 2
C. 3 D. 4

8. $9 - 4.653 =$ _____

- A. 5.347 B. 4.347
C. 3.347 D. 5.653

9. Which of the following expressions represents the model?

- A. $0.23 - 0.04$
B. $0.4 - 0.23$
C. $0.04 - 0.023$
D. $40 - 23$



10. $9.3 -$ _____ $= 8.254$

- A. 1.146
B. 1.46
C. 1.046
D. 17.554



Lesson (13): Decimal Story Problems:

Mazen has 35 L.E. He bought a ball for 9.75 L.E. and a book for 8.40 P.T.


How much money was left with Mazen ?



Hanaa has 200 pounds. She wants to buy a pair of shoes for 99.8 L.E. , a bag for 45.75 L.E. and a dress for 70.25 L.E.

Can she buy all what she wants ? Why ?



 Nile perch is 110 centimeters long and more than 5 years old. It weighs 113.39 kilograms and the vundu catfish weighs 38.1 kilograms and is 188 centimeters long.

What is the total mass of both the Nile perch and the vundu catfish ?



Wael has 14.75 pounds and his sister Mariam has 950 piasters.

Find the difference between what they have in pounds.



Homework

Subtract using the place value chart:

Complete the table.

The expression	Estimating difference	Actual difference
a. $3.94 - 1.23 =$	_____	_____
b. $29.98 - 11.99 =$	_____	_____
c. $0.97 - 0.82 =$	_____	_____
d. $5.05 - 4.15 =$	_____	_____
e. $4.45 - 4.32 =$	_____	_____



Find the result of each of the following.

a.

$$\begin{array}{r} 0.781 \\ - 0.531 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 0.593 \\ - 0.194 \\ \hline \end{array}$$

c.

$$\begin{array}{r} 0.5 \\ - 0.375 \\ \hline \end{array}$$

d.

$$\begin{array}{r} 3,218.975 \\ - 2,188.853 \\ \hline \end{array}$$

e.

$$\begin{array}{r} 4,524.62 \\ - 2,498.124 \\ \hline \end{array}$$

f.

$$\begin{array}{r} 4,611.3 \\ - 1,982.45 \\ \hline \end{array}$$



Mona has 3.95 L.E.

and Manal has 6.3 L.E.

How much do they have together ?



A man bought some goods for 306.7 L.E.
and sold them for 366.95 L.E.

Find his profit.



Ibrahim had 53.75 L.E. He spent 35.05 L.E.

Find the remainder with him.



Ali has 24.75 L.E. and Ahmed has $15\frac{1}{4}$ L.E.

Find how much money Ali and Ahmed
have together.



Hossam has 4.25 L.E. and his sister
Hend has 980 P.T.

Find the difference between what they have in pounds.





UNIT

2

Theme 1 | Number Sense and Operations

Unit 2

Number Relationships

Photo Credit: Mountains Hunter / Shutterstock.com



Concept (2-1)

Expressions, Equations and the Real World

Lesson (1): Expressions, Equations, and Variables:

Mathematical Expression

Mathematical expression is a statement contains numbers or numbers and symbols separated by one or more operations as : $[+ , - , \times \text{ and } \div]$ and doesn't contain the equal sign " $=$ ".

► Examples :

- $7.4 + 2.5 - 1.5$ • $49 - x - 24.5$
- $10 \times 3 \div 5$ • $42 \div k$
- $2.5 + m$ • $15 \div 3 \times 2$

Equation

Equation is a mathematical expression contains the equal sign " $=$ ".

► Examples :

- $24.8 - x = 17.5$
- $36.5 + 14.1 = k$
- $4.2 + 1.5 = 8.9 - 3.2$



1. Basma wanted to write an equation with a variable to represent "12.5 plus a number equals 15." Which of the following would be correct?

- A. $12.5 + 15 = x$
- B. $12.5 + x = 15$
- C. $15 + x = 12.5$
- D. $15 - x = 12.5$



3. If Farha knew that the sum of the heights of two sand dunes is 46 meters and one of the dunes is 18.25 m high, which equation could she write to find the unknown height? Select the two correct answers.

- A. $18.25 + x = 46$
- C. $46 - 18.25 = x$
- B. $18.25 + 46 = x$
- D. $x - 18.25 = 46$



Write "equation, expression or neither" in front of each statement.

- a. Hany saves 15 L.E. every day. What does Hany save in the week ? [_____]
- b. $2.45 + 13.12 - 5$ [_____]
- c. $1.8 + x = 2.8$ [_____]
- d. $3.6 + 1.4 = 5$ [_____]
- e. $35.45 - k = 15$ [_____]
- f. The sum of two numbers is 13.8 [_____]



Lesson (2): Variables in Equations:

You can solve equation in many ways :

① Mental math

Example : $15 + x = 18$

What number plus 15 equals 18 ?

The answer is 3

, then $x = 3$

② Inverse operation

Example : $y - 3.45 = 1.32$

$$y - 3.45 = 1.32$$

Inverse operation

, then $y = 1.32 + 3.45 = 4.77$

③ Using bar model

Example : $4.76 - b = 2.25$

4.76	
b	2.25

$$b = 4.76 - 2.25 = 2.51$$



1. $8.23 + p = 10.24$

$p =$ _____

2. $T - 2.45 = 0.26$

$T =$ _____

3. $2.45 + n = 5.24$

$n =$ _____

5. $h - 6.82 = 1.23$

$h =$ _____

6. $j - 12.40 = 3.01$

$j =$ _____

7. $5.52 + 2.01 + m = 9.21$

$m =$ _____



Solve the following equations, create a bar model to solve the following problems.

a. $m - 4.25 = 11.75$

b. $a + 19.5 = 30.8$

c. $1.2 = 2.4 - r$

d. $8.76 = 5.35 + w$



Solve each of the following equations using inverse operation strategy.

a. $76.85 + q = 90.96$

b. $v + 123.25 = 150.53$

c. $h - 15.32 = 7.83$



Lesson (3): Finding the Unknown:

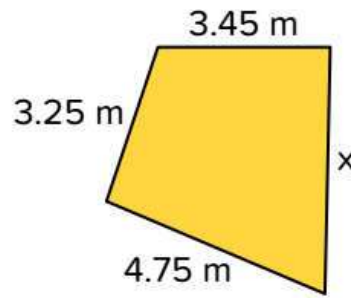
Whole:	
Part:	Part:



A truck carries 1.35 ton of fruits and 2.456 ton of vegetables. What is the total load of the truck ?



Variables in Perimeter If the perimeter of this shape is 16.70 meters, what does x equal?



1. Basem is taking a bus from Cairo to Ras Muhammad National Park to visit the coral reefs. The total journey is 492.64 kilometers. After 396.48 km, the bus stops in El Tor to pick up more passengers. How far is El Tor from Ras Muhammad National Park?



Lesson (4): Telling Stories with Numbers:

Write a story problem for the equation, then solve it.

$$x + 1.357 = 2.18$$



What is the story ?

Write a story problem for each of the following equations, then solve it.

a. $5.25 + 3.8 = n$

b. $7.85 - 3.685 = y$



Homework

Mark (✓) for the correct answer.

	Equation	Expression	Neither
$3.6 + x + 5.45$			
$2 + 3 = 4 + 1$			
$35.6 + 4.23 = x$			
Sum of two numbers is 15			
$8.43 - 2.34 = y + 2.85$			
15.68 more than a number			
$k - 15.8 + 7.18$			



- Is $4.5 + 6.25 = x$ the same as $4.5 + 6.25 = M$? Why or why not?
- Is $2.34 + 6 = 1.34 + 7$? Why or why not?



Solve the following equations, create a bar model to solve the following problems.

e. $3.45 + n = 6.75$

f. $17.22 - m = 15.17$

g. $2.53 + 4.38 + x = 12.76$

h. $15.38 + c = 9.23 + 16.3$



Solve each of the following equations using inverse operation strategy.

a. $8.23 + p = 10.24$

$p =$ _____

b. $t - 2.45 = 0.26$

$t =$ _____

c. $2.45 + n = 5.24$

$n =$ _____

d. $v + 42.89 = 100.01$

$v =$ _____

e. $h - 6.82 = 1.23$

$h =$ _____

f. $j - 12.40 = 3.01$

$j =$ _____



2. Basem and his friend Jana were snorkeling in Ras Muhammad National Park on the coral reef. Basem saw a hawksbill sea turtle that was 0.78 meter long. Jana saw a green turtle that was 0.58 m longer. How long was the green turtle?



What Is the Story?

1. Write a story problem for the equation and then solve: $x + 2.75 = 12.5$.

2. Write a story problem for the equation and then solve: $124.6 - 72.25 = m$.

3. Write a story problem for the equation and then solve: $34.750 - s = 15.25$.



Concept (2-2)

Factors and Multiples

Lesson (5): Finding Factors:

Crossing Sinai Read the passage and respond to the questions.



Beach Resort

Most cities in Sinai are along the coast of Sinai Peninsula. Some of the cities are popular holiday destinations.

1. A bicycle race was planned from Sharm El Sheikh to Taba along the Gulf of Aqaba. The distance by road is about 220 kilometers. The riders wanted to break up the ride into equal, whole-kilometer portions for rest and water stops. Which of the following distances would divide the entire ride into equal, whole-kilometer distances? Choose the two distances that the riders could use.

A. 10 km B. 12 km C. 20 km D. 25 km E. 50 km

2. What other ways could the distance be divided into equal parts?



Select Yes or No to indicate whether each value is a factor of the given number.

Number	Is 2 a factor?	Is 5 a factor?	Is 4 a factor?
A. 40	Yes No	Yes No	Yes No
B. 12	Yes No	Yes No	Yes No
C. 35	Yes No	Yes No	Yes No
D. 17	Yes No	Yes No	Yes No



List all of the factors of 15.



Azza was traveling from St. Katerine to El Tor on the coast. She made 24 cookies for the trip and wants to put them into bags for her siblings. Choose the set that lists ways she could divide the cookies into bags without any leftovers.

A. 2, 4, 5, 6, and 8 bags

C. 2, 3, 4, 6, 8, and 12 bags

B. 3, 5, 7, 10, and 12 bags

D. 3, 4, 6, 10, and 12 bags



Lesson (6): Prime Factorization:

The following table shows the prime numbers which lie between 1 and 100 :

2	3	5	7	11	13	17	19	23
29	31	37	41	43	47	53	59	61
	67	71	73	79	83	89	97	



Complete the factor trees by filling in the missing factors in your journal or using the digital tool.



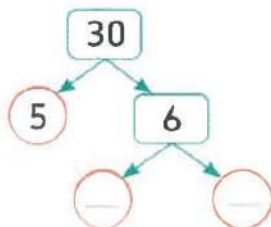
- Complete each of the factor trees (one of the factors is already listed).
- Decompose the composite factors until only prime numbers remain.
- Circle the prime factors. Draw a square around the composite factors.
- Record the prime factorization for each factor tree.

(Example: $24 = 2 \times 2 \times 2 \times 3$)



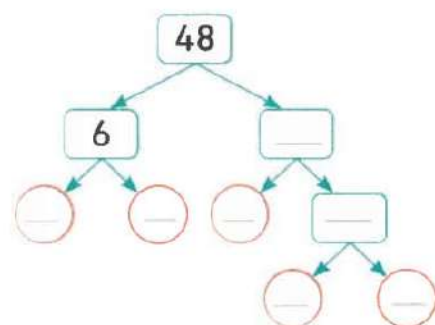
Factorize to prime factors.

a.



$$30 = _ \times _ \times _$$

b.



$$48 = _ \times _ \times _ \times _ \times _$$



Products of Prime Factors Find the product of the prime factorization listed. Then, list all other factors of the product.

1. $2 \times 2 \times 5 =$ _____

Other factors:

2. $2 \times 3 \times 7 =$ _____

Other factors:

3. $2 \times 2 \times 2 \times 7 =$ _____

Other factors:



Lesson (7): Greatest Common Factors:

How can you find the greatest common factor of 18 and 24 [GCF] ?

You can find the greatest common factor in two ways :

First way using listing method :



18		24	
①	18	①	24
②	9	②	12
③	6	③	8
		④	6

You studied this method in primary 4



Remember

- A **common factor** of two numbers is a factor of each of these numbers.
- The **greatest common factor (GCF)** of two numbers is the greatest number that is a factor of both.

- Factors of 18 : 1 , 2 , 3 , ~~6~~ , 9 , 18
- Factors of 24 : 1 , 2 , 3 , 4 , ~~6~~ , 8 , 12 , 24
- Common factors : 1 , 2 , 3 , 6
- The greatest common factor [GCF] : 6

Second way using prime factorization :

1

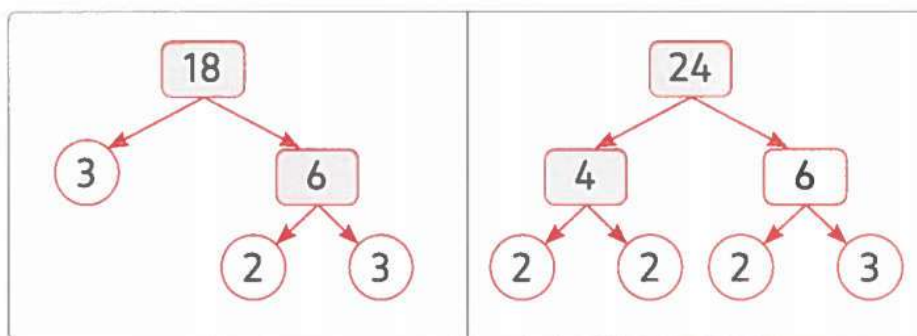
Factorize each number to its prime factors.

2

Find the common prime factors.

3

Find the product of these common prime factors.



$$18 = 2 \times 3 \times 3$$

$$24 = 2 \times 3 \times 2 \times 2$$

$$\text{GCF} = 2 \times 3 = 6$$

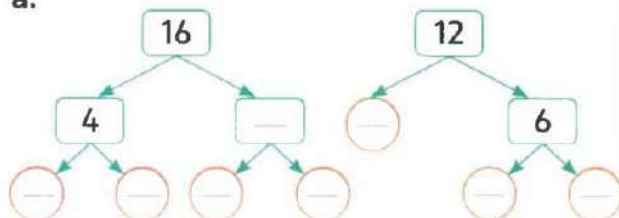


Find the GCF of 36 and 54



Find the prime factorization, then find the GCF

a.

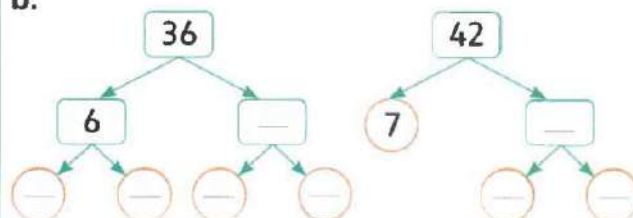


$$16 = \underline{\hspace{2cm}}$$

$$12 = \underline{\hspace{2cm}}$$

$$\text{GCF} = \underline{\hspace{2cm}}$$

b.



$$36 = \underline{\hspace{2cm}}$$

$$42 = \underline{\hspace{2cm}}$$

$$\text{GCF} = \underline{\hspace{2cm}}$$



Homework

Fill in the missing factors represented by the variables.

$4 \times m = 16$

$m = \underline{\hspace{2cm}}$

$v \times 15 = 45$

$v = \underline{\hspace{2cm}}$

$6 \times t = 42$

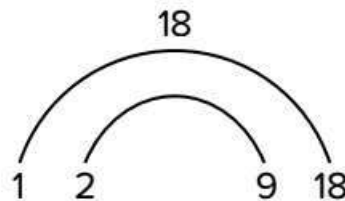
$t = \underline{\hspace{2cm}}$

$p \times 9 = 72$

$p = \underline{\hspace{2cm}}$



Ahmed created this factor rainbow for 18. What factors did he forget?



A. 8 and 10

B. 5 and 3

C. 4 and 4

D. 3 and 6



Circle the factors of the numbers listed.

a. 15: 2 5 10

c. 12: 2 5 10

b. 30: 2 5 10

d. 25: 2 5 10

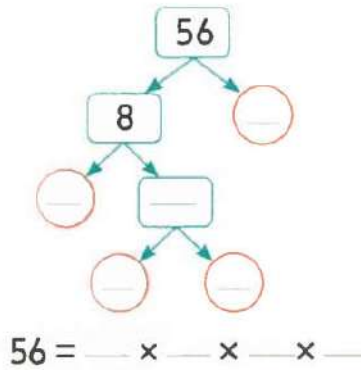
e. 16: 1 2 3 4 5 6 7 8 9 10

f. 20: 1 2 3 4 5 6 7 8 9 10

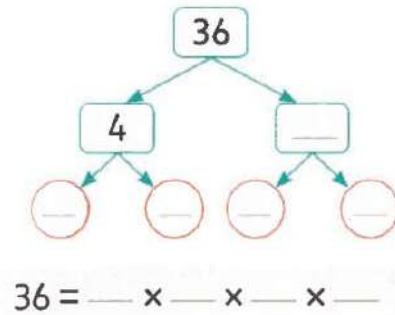


Factorize to prime factors.

a.

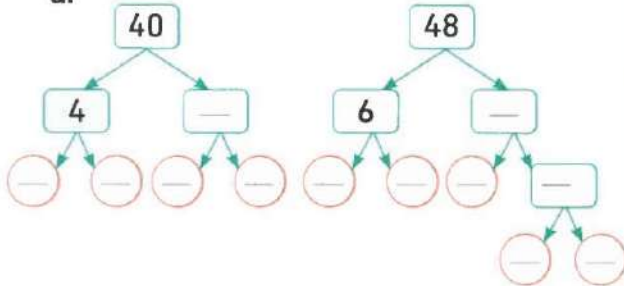


b.

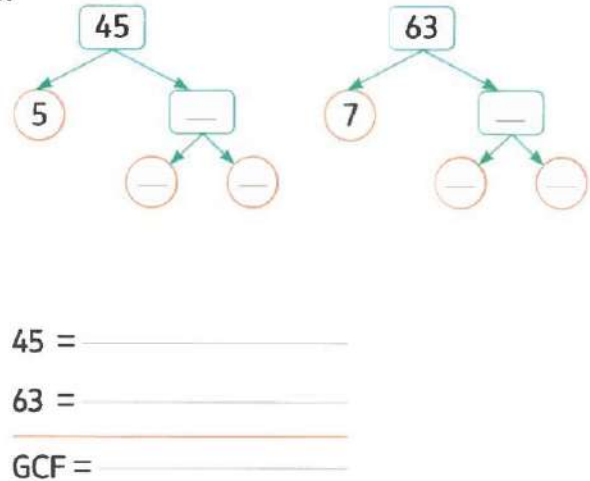


Find the prime factorization, then find the GCF

a.



b.



Choose the correct answer.

1. The GCF of 7 and 56 is _____

- A. 1 B. 56
C. 7 D. 14

2. The GCF of 18 and 27 is _____

- A. 1 B. 3
C. 6 D. 9

3. The GCF of 20 and 30

is _____

- A. 1 B. 4
C. 5 D. 10

4. The common factor of all numbers

is _____

- A. 0 B. 1
C. 2 D. 3



Lesson (8): Identifying Multiples:

1. List the first five multiples of 6. _____
2. List the first six multiples of 7. _____
3. List eight multiples of 10. _____



4. Adel is buying cartons of eggs and bottles of juice at the supermarket to make breakfast for friends. Each carton contains 12 eggs. Complete the chart for Adel.

Cartons	1	2	3	4	5	6
Eggs	12					



5. The juice comes in packs of 9. Complete the chart for Adel.

Packs	1	2	3	4	5	6
Juice	9					

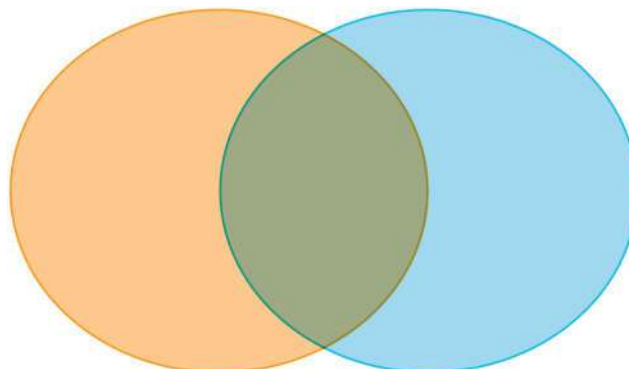


6. If Adel is buying enough eggs and juice for 36 people, how many cartons of eggs and packs of juice will he need to buy for each guest to have 1 egg and 1 juice?



Multiples of 3

Multiples of 4



Select the three numbers that are NOT common multiples of 5 and 7.

- | | | |
|-------|-------|--------|
| A. 14 | C. 35 | E. 70 |
| B. 21 | D. 55 | F. 105 |



Select the three numbers for which 24 and 32 are common multiples.

- | | | |
|------|------|------|
| A. 2 | C. 4 | E. 7 |
| B. 3 | D. 6 | F. 8 |



Lesson (9): Least common Multiple:

prime	factor	one
composite number	product	multiples

1. A _____ is a number with more than one set of factor pairs.
2. A _____ is a number multiplied by another number to find a product.
3. Skip counting is a way to find _____ of a number.
4. _____ is a factor of all numbers.
5. A _____ number's only factor pair is one and itself.
6. A _____ is the answer to a multiplication problem.



Least Common Multiple List at least three multiples of each number, then find the least common multiple (LCM) for each pair of numbers. If you do not find the LCM in the first three multiples, continue to list multiples until you find one.

1. 6 and 9

Multiples of 6: _____

Multiples of 9: _____

LCM: _____

2. 2 and 3

Multiples of 2: _____

Multiples of 3: _____

LCM: _____



3. 10 and 5

Multiples of 10: _____

Multiples of 5: _____

LCM: _____

5. 5 and 11

Multiples of 5: _____

Multiples of 11: _____

LCM: _____



4. 3 and 8

Multiples of 3: _____

Multiples of 8: _____

LCM: _____

6. 5 and 6

Multiples of 5: _____

Multiples of 6: _____

LCM: _____



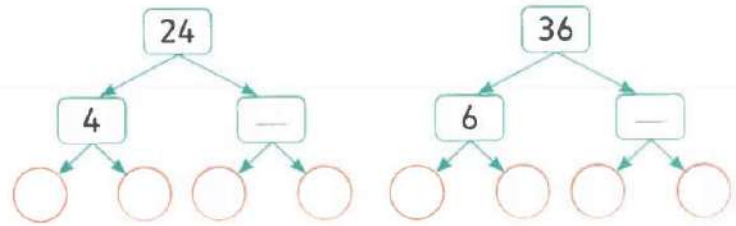
Find the least common multiple.

a. 24 and 36

$$24 = _ \times _ \times _ \times _$$

$$36 = _ \times _ \times _ \times _$$

$$\text{LCM} = _ \times _ \times _ \times _$$



f. 12, 9 and 18

$$12 = _ \times _ \times _ \times _$$

$$9 = _ \times _ \times _ \times _$$

$$18 = _ \times _ \times _ \times _$$

$$\text{LCM} = _ \times _ \times _ \times _$$



1. Badr is buying kofta and aish baladi for his birthday party. The kofta is sold in packages of 3. The bakery sells the aish baladi in packages of 12. Badr wants to have exactly the same number of each. What is the minimum number of kofta and aish baladi he should buy?

Package	1					
Kofta	3					

Package	1					
Aish Baldi	12					



2. Hend and Jana are biking around a small lake. Hend makes a complete lap around the lake in 6 minutes. It takes her younger sister, Jana, 8 minutes to finish one lap. If Hend and Jana continue to bike around the lake at the same rate, how many minutes will it take for them to come together at the starting point again?

Lap	1					
Hend	6					

Lap	1					
Jana	8					

Lesson (10): Factors or Multiples?

Greatest and Least Find the GCF and LCM for each number pair.

1. 12 and 10

GCF: _____ LCM: _____

2. 9 and 5

GCF: _____ LCM: _____

3. 11 and 2

GCF: _____ LCM: _____

4. 8 and 4

GCF: _____ LCM: _____

5. 9 and 12

GCF: _____ LCM: _____



1. Omnia has two strips of cloth. One is 35 centimeters wide, and the other is 75 cm wide. She wants to cut both pieces into strips of equal width that are as wide as possible. How wide should she cut the strips? Do you have to find the GCF or the LCM? What is the answer?



2. Omar exercises every 12 days. Rana exercises every 8 days. Both friends exercised together today. How many days will it be until they exercise together again? Do you have to find the GCF or the LCM? What is the answer?



3. Menna is giving her friends pencils and special erasers. The store sells pencils in boxes of 8 and erasers in boxes of 10. If Menna wants the same number of each, what is the minimum number of pencils that she will have to buy? Do you have to find the GCF or the LCM? What is the answer?



Homework

2. Complete using "Yes" or "No".

a. Is 34 a multiple of 9? _____

b. Is 40 a multiple of 8? _____

c. Is 35 a multiple of 4? _____

d. Is 30 a multiple of 2? _____

e. Is 7 a multiple of 7? _____

f. Is 81 a multiple of 9? _____



Find the least common multiple.

b. 15 and 18

15 = _____

18 = _____

LCM = _____



c. 12 and 9

12 = _____

9 = _____

LCM = _____



d. 32 and 48

32 = _____

48 = _____

LCM = _____



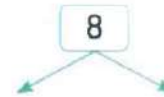
e. 6, 9 and 8

6 = _____

9 = _____

8 = _____

LCM = _____



4. Nour is making snack bags for an upcoming trip. He has 6 oranges and 12 pieces of dried fruit. He wants the snack bags to be identical without any food left over. What is the greatest number of snack bags Nour can make? Do you have to find the GCF or the LCM? What is the answer?



5. Malak baked 30 servings of cakes and 48 servings of baklava for her family. She wants to divide the desserts into containers so that each person receives the same number of servings. How many containers will she need? Do you have to find the GCF or the LCM? What is the answer?



6. Ola sells baskets of figs that each hold 9. She also sells bags of pomegranates that each hold 7. If she sells the same number of each, what is the smallest quantity of each type of fruit that she sold? Do you have to find the GCF or the LCM? What is the answer?



Choose the correct answer.

1. 20 is a multiple of _____

☐ A. 3 B. 6
☐ C. 8 D. 10

2. Which of the following is a multiple of 5?

☐ A. 23 B. 40
☐ C. 51 D. 64

3. Which of the following is a multiple of 9?

☐ A. 3 B. 45
☐ C. 56 D. 89

4. Which is NOT a multiple of 6?

☐ A. 0 B. 30
☐ C. 20 D. 42



5. Which of the following is NOT a multiple of 10?

- A. 10 B. 20
C. 35 D. 50

6. Which is a common multiple of 5 and 8?

- A. 20 B. 40
C. 35 D. 45

7. Which is NOT a common multiple of 9 and 6?

- A. 18 B. 54
C. 36 D. 42

8. The common multiple for all numbers is _____

- A. 0 B. 1
C. 2 D. 4



Find the GCF and LCM for each of the following numbers.

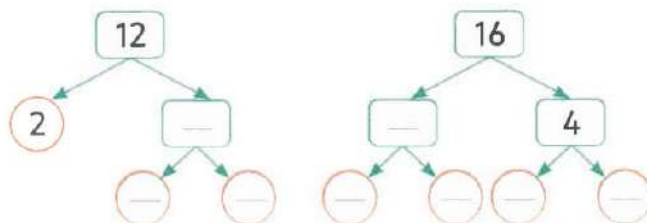
a. 12 and 16

12 = _____

16 = _____

GCF = _____

LCM = _____



b. 18 and 20

18 = _____

20 = _____

GCF = _____

LCM = _____



c. 24 and 36

24 = _____

36 = _____

GCF = _____

LCM = _____





UNIT

3

Theme 1 | Number Sense and Operations

Unit 3 Multiplication with Whole Numbers



Concept (3-1)

Models for Multiplication

Lesson (1): The Power of Ten:

Jumping by Powers of Ten Solve.

1. $8 \times \underline{\hspace{2cm}} = 8,000$
2. $3 \times 10,000 = \underline{\hspace{2cm}}$
3. $\underline{\hspace{2cm}} \times 9 = 900$
4. $2 \times \underline{\hspace{2cm}} = 200,000$
5. $1,000 \times 6 = \underline{\hspace{2cm}}$



Matching Expressions Choose from the given expressions to enter the one that is equal to the number.

5×100

10×5

$100,000 \times 5$

$5 \times 1,000$

$5 \times 10,000$

- A. 50,000 $\underline{\hspace{2cm}}$
- B. 500 $\underline{\hspace{2cm}}$
- C. 5,000 $\underline{\hspace{2cm}}$
- D. 50 $\underline{\hspace{2cm}}$
- E. 500,000 $\underline{\hspace{2cm}}$



1. A crate of mangoes weighs 9 kilograms. How many kilograms would 1,000 crates weigh?



Use basic facts and patterns to find each product.

a. $3 \times 1 = \square$
 $3 \times 10 = \square$
 $3 \times 100 = \square$
 $3 \times 1,000 = \square$
 $3 \times 10,000 = \square$

b. $14 \times 1 = \square$
 $14 \times 10 = \square$
 $14 \times 100 = \square$
 $14 \times 1,000 = \square$
 $14 \times 10,000 = \square$

c. $50 \times 1 = \square$
 $50 \times 10 = \square$
 $50 \times 100 = \square$
 $50 \times 1,000 = \square$
 $50 \times 10,000 = \square$



Fill in the blanks below.

a. 5 cm = _____ mm

b. 2 kg = _____ g

c. 7 L = _____ mL

d. 6 m = _____ cm

e. 10 km = _____ meters

f. 9 kilometers = _____ cm



Lesson (2): Using the Area Model to Multiply:

Multiplying Tens How many times will 10 need to be multiplied by itself to equal each given number?

1. 100
2. 1,000
3. 10,000
4. 100,000




Whiteboard: Expanding Equations

Work with your teacher and classmates to create area models and find each product.

1. $374 \times 62 =$ _____

2. $506 \times 42 =$ _____

$$374 \times 62$$

70

2	140	8

$$506 \times 42$$



Decompose with Area Model Eman is planting a garden. She wants to find the area of the garden to know how much topsoil she will need. The garden is 46 meters long and 24 m wide. How many different ways can you decompose the numbers to help her find the area?

$$46 \times 24 =$$

Example:

	20	20	6
20			
4			



Complete each of the following area models.

a.

	30	8
10		
6		

b.

	50	4
20		
3		



c.

80	100	70	5
2			

d.

50	300	60	1
6			



Lesson (3): The Distributive Property of Multiplication:

Use the Distributive Property of Multiplication and area model to find the product of each of the following.

a. $14 \times 27 =$ _____

$$[10 \times 20] + [10 \times \text{---}] + [\text{---} \times 20] + [4 \times \text{---}] =$$

	20	7
10	200	70
4	80	28



$58 \times 42 =$ _____

$$[40 \times \text{---}] + [40 \times 8] + [\text{---} \times 50] + [2 \times \text{---}] =$$

	50	8
40	2,000	320
2	100	16



$19 \times 62 =$ _____

$$[10 \times \text{---}] + [\text{---} \times 2] + [\text{---} \times 60] + [9 \times \text{---}] =$$

	60	2
10	600	20
9	540	18



Lesson (4): Using the Partial Products Model to Multiply:

Find the product using the partial products.

a.

$$\begin{array}{r} 45 \\ \times 72 \\ \hline \end{array}$$

← [— × —]
 + ← [— × —]
 + ← [— × —]
 + ← [— × —]

b.

$$\begin{array}{r} 564 \\ \times 35 \\ \hline \end{array}$$

← [— × —]
 + ← [— × —]
 + ← [— × —]
 + ← [— × —]
 + ← [— × —]
 + ← [— × —]



Homework

2. If 10 millimeters makes 1 centimeter, how many millimeters are in 7 centimeters?



3. There are 1,000 milliliters in 1 liter. Omar bought a 2-liter bottle of juice. How many milliliters are in the bottle?



4. Aya ran a 5-kilometer race on Saturday. If there are 1,000 meters in 1 kilometer, how many meters did she run?



Find each product of the following.

a. $3 \times 10 =$ _____

c. $1,000 \times 6 =$ _____

e. $2 \times 100,000 =$ _____

g. $10 \times 18 =$ _____

i. $13 \times 1,000 =$ _____

k. $100 \times 12 =$ _____

m. $15 \times 100,000 =$ _____

b. $6 \times 100 =$ _____

d. $3 \times 10,000 =$ _____

f. $10,000 \times 5 =$ _____

h. $30 \times 100 =$ _____

j. $70 \times 10,000 =$ _____

L. $60 \times 1,000 =$ _____

n. $80 \times 100,000 =$ _____



Fill in the blanks below.

a. $7 \text{ cm} =$ _____ mm

c. $8 \text{ L} =$ _____ mL

e. $5 \text{ kg} =$ _____ g

g. $7 \text{ km} =$ _____ cm

b. $3 \text{ km} =$ _____ m

d. $9 \text{ m} =$ _____ cm

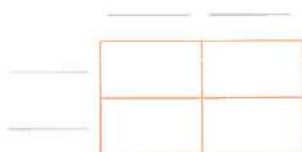
f. $20 \text{ L} =$ _____ mL

h. $50 \text{ m} =$ _____ mm

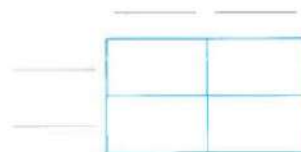


Expanding Equations. Create an area model for each of the following problems and find each product.

a. $21 \times 64 =$ _____



b. $103 \times 72 =$ _____



$$[20 \times 30] + [\text{---} \times \text{---}] + [\text{---} \times \text{---}] + [4 \times 7] = \text{---}$$

	30	7
20	600	140
4	120	28



	30	4
50	_____	200
_____	210	_____



a.

b. 

C.



[illegible]

Concept (3-2)

Multiplying 4-Digit Number by 2-Digit Number

Lesson (5): What Is an Algorithm?

Step 1

Multiply by ones.

$$\begin{array}{r} \textcircled{2}\textcircled{1}\textcircled{2} \\ 1,625 \\ \times \quad 24 \\ \hline 6,500 \end{array} \leftarrow [4 \times 1,625]$$

Step 2

Multiply by tens.

$$\begin{array}{r} \textcircled{1}\textcircled{1} \\ \textcircled{2}\textcircled{1}\textcircled{2} \\ 1,625 \\ \times \quad 24 \\ \hline 6,500 \\ 32,500 \end{array} \leftarrow [20 \times 1,625]$$

Step 3

Add the products.

$$\begin{array}{r} 1,625 \\ \times \quad 24 \\ \hline \textcircled{1} 6,500 \\ + 32,500 \\ \hline 39,000 \end{array}$$




Area Model	Partial Products Model	Standard Algorithm for Multiplication									
<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">30</div> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td></td><td>40</td><td>5</td></tr> <tr> <td></td><td>1,200</td><td>150</td></tr> <tr> <td>7</td><td>280</td><td>35</td></tr> </table> </div>		40	5		1,200	150	7	280	35	$\begin{array}{r} 45 \\ \times 37 \\ \hline (30 \times 40) = 1,200 \\ (30 \times 5) = 150 \\ (7 \times 40) = 280 \\ (7 \times 5) = 35 \\ \hline 1,665 \end{array}$	$\begin{array}{r} 1 \\ 45 \\ \times 37 \\ \hline 315 \\ + 1,350 \\ \hline 1,665 \end{array}$
	40	5									
	1,200	150									
7	280	35									



Akram says that 34×69 will give you the same product as $(34 \times 70) - 34$. Do you agree or disagree? Why?



Fill in the area model starting at letter A.

a.  20 6

30	D.	C.
3	B.	A.

Final product : _____

b. 70 8


50	D.	C.
2	B.	A.

Final product : _____



Lesson (6): Multiplying Multi-Digit Numbers:

Determine the values of the missing digits and then find the final product.

a.  ~~4~~

$$\begin{array}{r}
 67 \\
 \times 76 \\
 \hline
 402 \\
 + \square 69\square \\
 \hline
 \square
 \end{array}$$

b. ~~6~~

$$\begin{array}{r}
 49 \\
 \times 78 \\
 \hline
 3\square 2 \\
 + 3\square 30 \\
 \hline
 \square
 \end{array}$$

c. ~~1~~ 1

$$\begin{array}{r}
 563 \\
 \times 24 \\
 \hline
 225\square \\
 + 1\square 2\square 0 \\
 \hline
 \square
 \end{array}$$



Solve the following. First by estimate by round to the greatest place value, second use standard algorithm to find the actual product.

a. Estimate

$$\begin{array}{r}
 888 \rightarrow \underline{\hspace{2cm}} \\
 \times 29 \rightarrow \underline{\hspace{2cm}} \\
 \hline
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}}
 \end{array}$$

b. Estimate

$$\begin{array}{r}
 721 \rightarrow \underline{\hspace{2cm}} \\
 \times 74 \rightarrow \underline{\hspace{2cm}} \\
 \hline
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}}
 \end{array}$$

c. Estimate

$$\begin{array}{r}
 4,625 \rightarrow \underline{\hspace{2cm}} \\
 \times 18 \rightarrow \underline{\hspace{2cm}} \\
 \hline
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}} \\
 \underline{\hspace{2cm}}
 \end{array}$$



Choose the correct answer.

1. 17×18 ☐ 20×11

A. >

B. <

C. =

2. What is the Ones digit in the product of 37×124 ?

A. 2

B. 3

C. 6

D. 8

3. The product of 372×52 is close to _____

A. 20,000

B. 15,000

C. 7,000

D. 10,000

4. 831×49 is close to _____

A. 30,000

B. 32,000

C. 50,000

D. 40,000

5. The missing number in the product is _____

A. 2,882

B. 10,122

C. 2,892

D. 2,880

$$\begin{array}{r} 723 \\ \times 14 \\ \hline + 7,230 \\ \hline 10,122 \end{array}$$

6. 327×53 ☐ 199×43

A. >

B. <

C. =



Lesson (7): Multiplication Problems in the Real World:

Sandwiches at the diner are 24 pounds, a salad costs 3 pounds and a glass of juice is 8 pounds. A Family went to the diner and order 3 sandwiches, 2 salads and 3 glasses of juice.



a. How much will the family pay for the 3 sandwiches ? _____

b. How much will the family pay for the 2 salads ? _____

c. How much will the family pay for the 3 glasses of juice ? _____

d. How much is the total bill ? _____



Shirts in the seasons costs 185 pounds. Sweaters cost 270 pounds. Yara and her friends bought 12 shirts and 13 sweaters. _____

- How much will they pay for the shirts ? _____
- How much will they pay for the sweaters ? _____
- How much is their bill ? _____



For Wael's baklava syrup, he needs 250 milliliters of honey, 15 mL of orange extract, and 30 mL of lemon juice per recipe. How many total milliliters of liquid ingredients will he need for the sauce if he needs to make 18 batches?



Mona uses 1,133 grams of sugar daily. How many grams does she use in 30 weeks?



Homework

1. Use standard algorithm strategy to find the result.

a. 35×862

b. $74 \times 5,641$

c. $2,504 \times 16$



	300	60	7
20	F.	E.	D.
9	C.	B.	A.

Final product : _____

	500	40	6
10	F.	E.	D.
8	C.	B.	A.

Final product : _____



Find the result using standard algorithm.

$$\begin{array}{r} \text{a. } 26 \\ \times 33 \\ \hline \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{b. } 78 \\ \times 52 \\ \hline \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{c. } 367 \\ \times 29 \\ \hline \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{d. } 546 \\ \times 18 \\ \hline \\ \hline \\ \hline \end{array}$$



Estimate the product.

a. 416×72

b. 871×27

c. 586×69

d. 490×71

e. 817×34

f. 999×94



Mona makes freshly squeezed lemonade each day for her customers. She uses 6 lemons for each liter of lemonade. She makes 8 liters of lemonade a day. After 365 days, how many lemons has she used?

How many liters of lemonade does she make in 365 days?



For Wael's baklava syrup, he needs 250 milliliters of honey, 15 mL of orange extract, and 30 mL of lemon juice per recipe. How many total milliliters of liquid ingredients will he need for the sauce if he needs to make 18 batches?

